

What is claimed is:

1. A galvanic element comprising at least one lithium-intercalating electrode having electrochemically active material applied to a metallic output conductor or a substrate sheet, in the form of foil, wherein the metallic output conductor or substrate sheet has on a surface thereof electrochemically deposited crystallites of a second or substantially identical metal, the crystallites enlarging contact area of the element and reducing contact resistance to the active material.
2. The galvanic element of Claim 1, wherein the metallic output conductor or substrate sheet is selected from a component of the group consisting of Al, Cu, V, Ti, Cr, Fe, Ni, Co, alloys thereof and corrosion-resistant stainless steel.
3. The galvanic element of Claim 1, wherein the electrochemically active material is selected from the group consisting of Cu, V, Ti, Cr, Fe, Ni, Co, Zn, Sn, In, Sb, Bi, Ag and alloys thereof.
4. The galvanic element of Claim 1, wherein crystallite size of the electrochemically is between about 1 and about 25 μm , preferably between 1 and 10 μm .
5. The galvanic element of Claim 1, wherein the thickness of the metallic output conductor or substrate sheet is between about 5 and about 50 μm .

6. The galvanic element of Claim 1, wherein the thickness of the metallic output conductor or substrate sheet is between about 8 and about 25 μm .
7. The galvanic element of Claim 1, wherein a maximum of 10 crystallite layers, are deposited on the metallic output conductor or substrate sheet.
8. The galvanic element of Claim 1, wherein a maximum of 1 to 3 crystallite layers, are deposited on the metallic output conductor or substrate sheet.
9. The galvanic element of Claim 1, wherein the crystallites are provided with a corrosion layer made from benzotriazole or chromization is applied by immersion.
10. The galvanic element of Claim 1, wherein the electrochemically active material is laminated onto the metallic output conductor or substrate sheet in the form of a sheet.